

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Age hrs Client Info 9449 9413 9137 oil Age hrs Client Info 1091 555 279 oil Age client Info 1091 555 279 out Changed Client Info Changed Not Changed Not Changed y contamination in the CONTAMINATION method Imutbase ourrent history1 History2 Fuel WC Method 3.0 <1.0 <1.0 <1.0 <1.0 Nith The condition of the vice. WEAR MC Method 3.0 <1.0 <1.0 <1.0 Nith The condition of the vice. Wear WC Method 3.0 <1.0 <1.0 <1.0 Nith The condition of the vice. Wear WC Method 3.0 <1.0 <1.0 <1.0 Nith The condition of the vice. Wear MC Method 3.0 <1.0 <1.0 <1.0 <1.0 Nith Condition ppm ASTM DS1550 >160 0 <1.0 <1.0 <1.0<		·					
ce interval to monitor. Sample Date Client Info 31 May 2024 28 May 2024 18 Apr 2024 Machine Age hrs Client Info 9449 9413 9137 are normal. Ol Age hrs Client Info 1091 555 279 out Changed Client Info 1091 555 279 Not Changed Not Change Not Change Not Change <td></td> <td>SAMPLE INFORMA</td> <td>TION method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>		SAMPLE INFORMA	TION method	limit/base	current	history1	history2
Are normal.Machine Age Di Age Di Changed Lic Changed Sample StatusClient Info9499439137y contamination in the there is suitable ty contamination in the by the suitable of the sui		Sample Number	Client Info		GFL0122191	GFL0122180	GFL0118013
are normal. Oil Age hrs Client Info 1091 555 279 Oil Changed Oil Changed Client Info Changed Not Change Not Changed Not Changed <td>ice interval to monitor.</td> <td>Sample Date</td> <td>Client Info</td> <td></td> <td>31 May 2024</td> <td>28 May 2024</td> <td>18 Apr 2024</td>	ice interval to monitor.	Sample Date	Client Info		31 May 2024	28 May 2024	18 Apr 2024
Oil Changed Client Info Changed Not Changed Not Changed Not Changed Not Changed y contamination in the tit there is suitable vice. CONTAMINATION method imit/base current history1 history2 Fuel WC Method >3.0 <1.0		Machine Age h	rs Client Info		9449	9413	9137
Sample Status NORMAL NORMAL NORMAL NORMAL it there is suitable sit. The condition of the vise. CONTAMINATION method Imit/base current history1 history2 Fuel WC Method >3.0 <1.0	are normal.	Oil Age h	rs Client Info		1091	555	279
CONTAMINATION method imit/base current history1 history2 Fuel WC Method >3.0 <1.0		Oil Changed	Client Info		Changed	Not Changd	Not Changd
Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5186m >5 0 <16	y contamination in the	Sample Status			NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG NEG Water Glycol WC Method NEG NEG NEG NEG Glycol WC Method MEG NEG NEG NEG NEG Iron ppm ASTM D5185m >165 0 16 10 Chromium ppm ASTM D5185m >4 0 0 0 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m 20 0 0 0 Copper ppm ASTM D5185m 20 0 0 0 Copper ppm ASTM D5185m 20 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method Imit/base current History1		CONTAMINATIO	N method	limit/base	current	history1	history2
Magnetic Water WC Method >0.2 NEG NEG NEG Glycol WC Method WE Method NEG NEG NEG WEAR METALS method limit/base current history2 Iron ppm ASTM D5186m >165 0 -1 <1	t thoro is suitable	Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol WC Method NEG NEG NEG VVEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5186m >165 0 16 10 Chromium ppm ASTM D5186m >4 0 0 0 Nickel ppm ASTM D5186m >2 0 0 0 Nickel ppm ASTM D5186m >2 0 0 0 Auminum ppm ASTM D5186m >2 0 0 0 0 Auminum ppm ASTM D5186m >150 0 0 <1		Water	WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m<>165 0 16 10 Chromium ppm ASTM D5185m<>-5 0 <1 <1 Nickel ppm ASTM D5185m >2 0 0 0 Tittanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >20 <1 2 2 Lead ppm ASTM D5185m >20 0 0 <11 Tin ppm ASTM D5185m >20 0 0 <11 Tin ppm ASTM D5185m >5 0 0 <11 Tin ppm ASTM D5185m >5 0 0 <11 Cadmium ppm ASTM D5185m 0 0 0 0 0 ADDITIVES ppm ASTM D5185m 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0		Glycol	WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 0 <1 <1 Nickel ppm ASTM D5185m >4 0 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Auminum ppm ASTM D5185m >20 <1		WEAR METALS	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >4 0 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >150 0 0 <1		lron p	pm ASTM D5185m	>165	0	16	10
Nickel ppm ASTM D5185m >-4 0 0 0 Titanium ppm ASTM D5185m >-2 0 0 0 Silver ppm ASTM D5185m >-2 0 0 0 Aluminum ppm ASTM D5185m >150 0 0 <1				>5		<1	<1
Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >20 0 0 Aluminum ppm ASTM D5185m >20 21 2 2 Lead ppm ASTM D5185m >20 0 0 1 Tin ppm ASTM D5185m >90 0 1 1 Tin ppm ASTM D5185m >5 0 0 1 Cadmium ppm ASTM D5185m 0 0 0 1 Boron ppm ASTM D5185m 0 4 9 8 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 1120 Phosphorus ppm ASTM D5185m 1010 878 849 898 Calcium ppm ASTM D5185m					0	0	0
Aluminum ppm ASTM D5185m >20 <1 2 2 Lead ppm ASTM D5185m >150 0 0 <1				>2	0	0	0
Aluminum ppm ASTM D5185m >20 <1 2 2 Lead ppm ASTM D5185m >150 0 0 <1		Silver p	pm ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >90 0 <1 1 Tin ppm ASTM D5185m >5 0 0 <1				>20	<1	2	2
Copper ppm ASTM D5185m >90 0 <1 1 Tin ppm ASTM D5185m >5 0 0 <1		Lead p	pm ASTM D5185m	>150	0	0	<1
Tin ppm ASTM D5185m >5 0 0 <1 Vanadium ppm ASTM D5185m 0 0 <1				>90	0	<1	1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 4 9 8 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 11 Maganesium ppm ASTM D5185m 0 0 0 <11				>5	0	0	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 4 9 8 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 60 63 63 Magnesium ppm ASTM D5185m 1010 878 849 898 Calcium ppm ASTM D5185m 1070 1068 1058 1120 Phosphorus ppm ASTM D5185m 1070 1068 1058 1120 Zinc ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 26 4 3 Sodium ppm ASTM D5185m 22 4 3 Sodium ppm ASTM D5185m 20 <1		Vanadium p	pm ASTM D5185m		0	0	<1
Boron ppm ASTM D5185m 0 4 9 8 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 60 60 63 63 Manganese ppm ASTM D5185m 0 0 0 0 <1 Magnesium ppm ASTM D5185m 1010 878 849 898 Calcium ppm ASTM D5185m 1010 878 849 898 Calcium ppm ASTM D5185m 1070 1068 1058 1120 Phosphorus ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 2060 3527 3178 3486 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1 2 2 Sodium ppm					0		
Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 60 60 63 63 Manganese ppm ASTM D5185m 0 0 0 <1		ADDITIVES	method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 60 63 63 Manganese ppm ASTM D5185m 0 0 0 <1		Boron p	pm ASTM D5185m	0	4	9	8
Manganese ppm ASTM D5185m 0 0 0 <1 Magnesium ppm ASTM D5185m 1010 878 849 898 Calcium ppm ASTM D5185m 1070 1068 1058 1120 Phosphorus ppm ASTM D5185m 1150 1016 974 1002 Zinc ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 2060 3527 3178 3486 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >35 2 4 3 Potassium ppm ASTM D5185m >20 <1		Barium p	pm ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 878 849 898 Calcium ppm ASTM D5185m 1070 1068 1058 1120 Phosphorus ppm ASTM D5185m 1150 1016 974 1002 Zinc ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 2060 3527 3178 3486 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >35 2 4 3 Sodium ppm ASTM D5185m >20 <1		Molybdenum p	pm ASTM D5185m	60	60	63	63
Calcium ppm ASTM D5185m 1070 1068 1058 1120 Phosphorus ppm ASTM D5185m 1150 1016 974 1002 Zinc ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 2060 3527 3178 3486 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >35 2 4 3 Sodium ppm ASTM D5185m >20 <1		Manganese p	pm ASTM D5185m	0	0	0	<1
Phosphorus ppm ASTM D5185m 1150 1016 974 1002 Zinc ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 2060 3527 3178 3486 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >35 2 4 3 Sodium ppm ASTM D5185m >35 2 4 3 Potassium ppm ASTM D5185m >20 <11 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >7.5 0.1 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 4.5 8.8 6.7 Sulfation Abs/Lmm *ASTM D7644 >20 4.5 8.8 6.7 Sulfation Abs/Lmm *ASTM D7644<		Magnesium p	pm ASTM D5185m	1010	878	849	898
Zinc ppm ASTM D5185m 1270 1201 1166 1164 Sulfur ppm ASTM D5185m 2060 3527 3178 3486 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >35 2 4 3 Sodium ppm ASTM D5185m >35 2 4 3 Potassium ppm ASTM D5185m >20 <1		Calcium p	pm ASTM D5185m	1070	1068	1058	1120
SulfurppmASTM D5185m2060352731783486CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>35243SodiumppmASTM D5185m>35243PotassiumppmASTM D5185m>20<1		Phosphorus p	pm ASTM D5185m	1150	1016	974	1002
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>35243SodiumppmASTM D5185m>35243PotassiumppmASTM D5185m>20<1			pm ASTM D5185m	1270	1201	1166	1164
SiliconppmASTM D5185m>35243SodiumppmASTM D5185m<		Sulfur p	pm ASTM D5185m	2060	3527	3178	3486
Sodium ppm ASTM D5185m <1 4 3 Potassium ppm ASTM D5185m >20 <1		CONTAMINANTS	S method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >7.5 0.1 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 4.5 8.8 6.7 Sulfation Abs/.1mm *ASTM D7415 >30 16.7 19.2 18.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.7 14.7 13.2		Silicon p	pm ASTM D5185m	>35	2	4	3
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >7.5 0.1 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 4.5 8.8 6.7 Sulfation Abs/.1mm *ASTM D7415 >30 16.7 19.2 18.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.7 14.7 13.2		Sodium p	pm ASTM D5185m		<1	4	3
Soot % % *ASTM D7844 >7.5 0.1 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 4.5 8.8 6.7 Sulfation Abs/.1mm *ASTM D7415 >30 16.7 19.2 18.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.7 14.7 13.2		Potassium p	pm ASTM D5185m	>20	<1	2	2
Nitration Abs/cm *ASTM D7624 >20 4.5 8.8 6.7 Sulfation Abs/.1mm *ASTM D7415 >30 16.7 19.2 18.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.7 14.7 13.2		INFRA-RED	method	limit/base	current	history1	history2
SulfationAbs/.1mm*ASTM D7415>3016.719.218.1FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2511.714.713.2		Soot %	% *ASTM D7844	>7.5	0.1	0.6	0.4
Sulfation Abs/.1mm *ASTM D7415 >30 16.7 19.2 18.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.7 14.7 13.2		Nitration A	bs/cm *ASTM D7624	>20	4.5	8.8	6.7
Oxidation Abs/.1mm *ASTM D7414 >25 11.7 14.7 13.2		Sulfation Al	os/.1mm *ASTM D7415	>30		19.2	18.1
		FLUID DEGRADA	TION method	limit/base	current	history1	history2
		Oxidation Al	os/.1mm *ASTM D7414	>25	11.7	14.7	13.2
		Base Number (BN) m	g KOH/g ASTM D2896	9.8		7.5	8.0

Area (EGX027) 2870

Diesel Engine Fluid

PETRO CANADA DURON SHP 15W40 (7 GAL)

DIAGNOSIS

Recommendation

Resample at the next serv

Wear

All component wear rates

Contamination

There is no indication of an oil.

Fluid Condition

The BN result indicates that alkalinity remaining in the c oil is suitable for further set

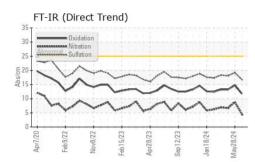


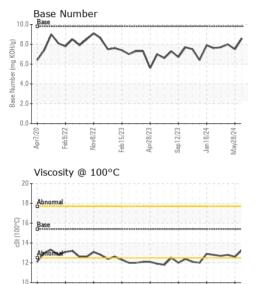
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OIL ANALYSIS REPORT





eb15/23

or28/23

Sep12/23

Jan 18/24

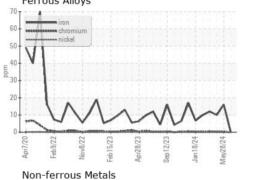
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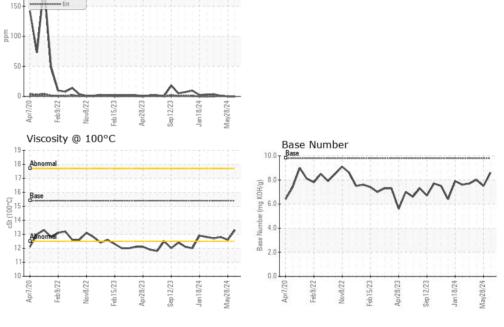
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	12.6	12.8
GRAPHS						

Ferrous Alloys

lead

200





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 010 - Stockbridge Sample No. : GFL0122191 Received : 03 Jun 2024 1280 Rum Creek Parkway Lab Number : 06197294 Tested : 03 Jun 2024 Stockbridge, GA Unique Number : 11059417 Diagnosed : 03 Jun 2024 - Wes Davis US 30281 Test Package : FLEET Contact: TECHNICIAN ACCOUNT Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. wcgfldemo@gmail.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Report Id: GFL010 [WUSCAR] 06197294 (Generated: 06/03/2024 17:43:13) Rev: 1

Submitted By: JOSHUA TINKER Page 2 of 2